

733-740

Pantania n. sp. near fragilis

8 S

Galls on Salix sericea Plattburgh N.Y.
Aug 27 1897. Solitary, smooth, exceeding
edge of leaf, from midrib to beyond
margin and at varying distance
from base; not evenly divided by
leaf, $\frac{1}{3}$ above, $\frac{2}{3}$ below; elongate



pyriform or rounded, a few
corky dots, greenish, strongly
red shaded especially above. L 8-9;
w $6 \pm$ height $5 \pm$ mm thick, fleshy, the
meat white with pink line.

Larva .6 all white, eye and mouth black
Hd 1.0 whitish, a dusky shade above, eye
black, mouth brown. Body all white, waxy,
not shining, segs obscurely 3-annulate and
a little blackish shaded in the folds. Thor-
ax rather large, robust, abd. 6-11, also
distinct, slender. Body uniform; 2-11 folds
somewhat prominent, 13 tapering. L $6\frac{1}{2}$ mm
Out of gall Sept. 17. / Out March 25 1898

Pantania n. sp. near pusillum

8 T

Galls with 8 S but gregarious, hairy
and spherical. Near base of leaf, 3, 2 or
rarely one, exceeding margin
often by $\frac{1}{2}$ diameter, not



evenly divided by leaf, $\frac{1}{3}$ or a
little more above, about $\frac{2}{3}$ below. Pale
greenish, often heavily marked & mottled
with red above, pale below, rarely uniform,
pale. Strongly silky hairy like the
leaves below, less hairy or even smooth
above. $8.5 \times 8.5 \times 7$ mm or down to
5 mm diameter. Fleshy, meat strongly
pink streaked.

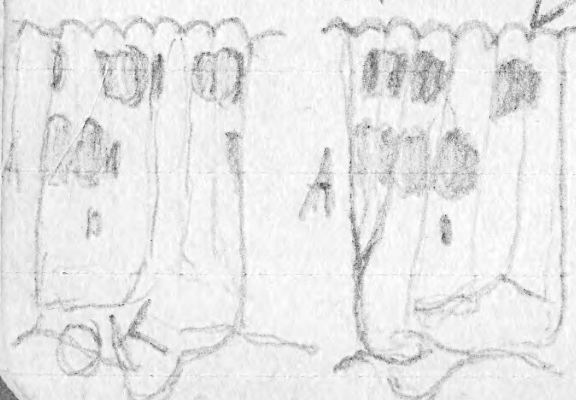
Larva .9 all white, eye & mouth black, body
annulate, with large concolorous tubercle
joint 13 tapering.

Out March 31 1898

shed skins of last stage are fine, hard, unspotted
 a sh. hd 2.40 mm. Out June 4 1898

♀ 2E Harpiphora varicornis Nutt
 8U = 2E

From Dr. E. F. Love, taken at Yorkers
 Aug. 27 1897. Reached me Aug. 31 in
 swimming jacket and anxious to
 be in word. Foot like button ball bush.
 (Swimming jacket) Hds black 2.4 ± mm. Body
 ochre yellow sr and feet 6-13, d. to
 spiracles slightly bluish yellow bearing
 black spotted; no bloom; anal plate
 black. Spots large, 2 sd and one lat.
 per seg. sd annulets 1-3, 5-6 ant; lat on
 annulets 1-5. Segs not very distinctly
 6 annulate. 2 narrowly yellow in
 front. a narrow raised collar-like
 ridge on joint 13 ant. (Annulet 4 pale)
 Spiracle on pale annulet 4. [Doubtless annulet
 counted wrong. Did not want to kill seg.]



Dr Love sent more Sept 10. Hds 2.5
 2.3 on Cornus (had stained) large larvae
 ant. annulets 2 and 4th of 13 high about
 collar. Hds of 2. 11-12-13-14-15-16-17-18-19-20-21-22-23-24-25-26-27-28-29-30-31-32-33-34-35-36-37-38-39-40-41-42-43-44-45-46-47-48-49-50-51-52-53-54-55-56-57-58-59-60-61-62-63-64-65-66-67-68-69-70-71-72-73-74-75-76-77-78-79-80-81-82-83-84-85-86-87-88-89-90-91-92-93-94-95-96-97-98-99-100-101-102-103-104-105-106-107-108-109-110-111-112-113-114-115-116-117-118-119-120-121-122-123-124-125-126-127-128-129-130-131-132-133-134-135-136-137-138-139-140-141-142-143-144-145-146-147-148-149-150-151-152-153-154-155-156-157-158-159-160-161-162-163-164-165-166-167-168-169-170-171-172-173-174-175-176-177-178-179-180-181-182-183-184-185-186-187-188-189-190-191-192-193-194-195-196-197-198-199-200-201-202-203-204-205-206-207-208-209-210-211-212-213-214-215-216-217-218-219-220-221-222-223-224-225-226-227-228-229-230-231-232-233-234-235-236-237-238-239-240-241-242-243-244-245-246-247-248-249-250-251-252-253-254-255-256-257-258-259-260-261-262-263-264-265-266-267-268-269-270-271-272-273-274-275-276-277-278-279-280-281-282-283-284-285-286-287-288-289-290-291-292-293-294-295-296-297-298-299-300-301-302-303-304-305-306-307-308-309-310-311-312-313-314-315-316-317-318-319-320-321-322-323-324-325-326-327-328-329-330-331-332-333-334-335-336-337-338-339-340-341-342-343-344-345-346-347-348-349-350-351-352-353-354-355-356-357-358-359-360-361-362-363-364-365-366-367-368-369-370-371-372-373-374-375-376-377-378-379-380-381-382-383-384-385-386-387-388-389-390-391-392-393-394-395-396-397-398-399-400-401-402-403-404-405-406-407-408-409-410-411-412-413-414-415-416-417-418-419-420-421-422-423-424-425-426-427-428-429-430-431-432-433-434-435-436-437-438-439-440-441-442-443-444-445-446-447-448-449-450-451-452-453-454-455-456-457-458-459-460-461-462-463-464-465-466-467-468-469-470-471-472-473-474-475-476-477-478-479-480-481-482-483-484-485-486-487-488-489-490-491-492-493-494-495-496-497-498-499-500-501-502-503-504-505-506-507-508-509-510-511-512-513-514-515-516-517-518-519-520-521-522-523-524-525-526-527-528-529-530-531-532-533-534-535-536-537-538-539-540-541-542-543-544-545-546-547-548-549-550-551-552-553-554-555-556-557-558-559-560-561-562-563-564-565-566-567-568-569-570-571-572-573-574-575-576-577-578-579-580-581-582-583-584-585-586-587-588-589-590-591-592-593-594-595-596-597-598-599-600-601-602-603-604-605-606-607-608-609-610-611-612-613-614-615-616-617-618-619-620-621-622-623-624-625-626-627-628-629-630-631-632-633-634-635-636-637-638-639-640-641-642-643-644-645-646-647-648-649-650-651-652-653-654-655-656-657-658-659-660-661-662-663-664-665-666-667-668-669-670-671-672-673-674-675-676-677-678-679-680-681-682-683-684-685-686-687-688-689-690-691-692-693-694-695-696-697-698-699-700-701-702-703-704-705-706-707-708-709-710-711-712-713-714-715-716-717-718-719-720-721-722-723-724-725-726-727-728-729-730-731-732-733-734-735-736-737-738-739-740-741-742-743-744-745-746-747-748-749-750-751-752-753-754-755-756-757-758-759-760-761-762-763-764-765-766-767-768-769-770-771-772-773-774-775-776-777-778-779-780-781-782-783-784-785-786-787-788-789-790-791-792-793-794-795-796-797-798-799-800-801-802-803-804-805-806-807-808-809-810-811-812-813-814-815-816-817-818-819-820-821-822-823-824-825-826-827-828-829-830-831-832-833-834-835-836-837-838-839-840-841-842-843-844-845-846-847-848-849-850-851-852-853-854-855-856-857-858-859-860-861-862-863-864-865-866-867-868-869-870-871-872-873-874-875-876-877-878-879-880-881-882-883-884-885-886-887-888-889-890-891-892-893-894-895-896-897-898-899-900-901-902-903-904-905-906-907-908-909-910-911-912-913-914-915-916-917-918-919-920-921-922-923-924-925-926-927-928-929-930-931-932-933-934-935-936-937-938-939-940-941-942-943-944-945-946-947-948-949-950-951-952-953-954-955-956-957-958-959-960-961-962-963-964-965-966-967-968-969-970-971-972-973-974-975-976-977-978-979-980-981-982-983-984-985-986-987-988-989-990-991-992-993-994-995-996-997-998-999-1000-1001-1002-1003-1004-1005-1006-1007-1008-1009-1010-1011-1012-1013-1014-1015-1016-1017-1018-1019-1020-1021-1022-1023-1024-1025-1026-1027-1028-1029-1030-1031-1032-1033-1034-1035-1036-1037-1038-1039-1040-1041-1042-1043-1044-1045-1046-1047-1048-1049-1050-1051-1052-1053-1054-1055-1056-1057-1058-1059-1060-1061-1062-1063-1064-1065-1066-1067-1068-1069-1070-1071-1072-1073-1074-1075-1076-1077-1078-1079-1080-1081-1082-1083-1084-1085-1086-1087-1088-1089-1090-1091-1092-1093-1094-1095-1096-1097-1098-1099-1100-1101-1102-1103-1104-1105-1106-1107-1108-1109-1110-1111-1112-1113-1114-1115-1116-1117-1118-1119-1120-1121-1122-1123-1124-1125-1126-1127-1128-1129-1130-1131-1132-1133-1134-1135-1136-1137-1138-1139-1140-1141-1142-1143-1144-1145-1146-1147-1148-1149-1150-1151-1152-1153-1154-1155-1156-1157-1158-1159-1160-1161-1162-1163-1164-1165-1166-1167-1168-1169-1170-1171-1172-1173-1174-1175-1176-1177-1178-1179-1180-1181-1182-1183-1184-1185-1186-1187-1188-1189-1190-1191-1192-1193-1194-1195-1196-1197-1198-1199-1200-1201-1202-1203-1204-1205-1206-1207-1208-1209-1210-1211-1212-1213-1214-1215-1216-1217-1218-1219-1220-1221-1222-1223-1224-1225-122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shiny, rounded, recalling snakes.
Hd. jet black. Body bright ochre s-v, feet
and 2 anteriorly. Dorsum to apurule
light blue on annulet 2 and 4, on 4
clear down, on 2 up to middle of side.
Other annulets including collar of 13
and whole of sides all deep blue black
forming disconnected black parallelograms
centered and separated by pale blue.

Oct June 25 1898

Fly like *H. tarsatus* (60) but hind
knees a little blacker.

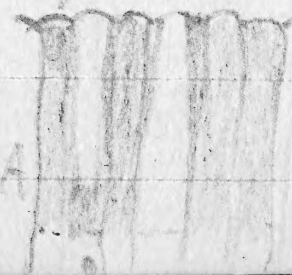
Harpiphorus tarsatus Say

8W = 60

From Juntel (locality? said in "amgum" but
none in can and ate Corvus) No bloom. Hd
black, shiny 2.8 mm. Anal plate black
2 ant. and s-v below spiracle. ochre yellow
Dorsum leader blue greenish, under lens
dotted with fat granules in the 6 coarse
annulets. Blotched with black in
line or less ill defined spots, a large
d. row, 2 per seg. ^{not or} hardly distinct on
dorsal line and a small
lateral spot. Dorsal vessel
dark. Patches blotched, varying
Feet 6-13, tho. indistinct. No
distinct collars.



Sept 18 (ultimate) Like 60.
2 ant, s-v ochre. Dorsum blue
black, annulet 2 to just above
spiracle and all of 4 blue green.



Oct July 7 1898

8X

Shiny sticky slug on Quercus tinctoria
 Seelyport L.I. Sept. 17 1897. Thorax,
 black, abd. tapering behind, feet 6-12.
 Shiny translucent, tinged with orange
 throughout, darkest on anterior edge
 of 2 overhanging head. Hd pale, oblique
 retracted, eye black, w. 9 mm. Very
 shiny, sticky, a little soiled; food
 plainly by transparency, green. Solitary
 on upper side of leaf, puncturing with
 proboscis.
Ultimate larva, not shiny, all orange
 tinted, slightly hairy streaked transverse.
 Ant. and of 2 dark orange. Food dark green.

8Y

^{under side of leaf}
 of slug on live oak below Almond
 Fla., Jan 16 1898. Head high, oval, shiny
 black. 1.1 mm. over $\frac{1}{2}$ wide 2. Not shiny
 by transparency. Thorax widened at outer
 sides. Flanged. Body rather black, smaller
 just., all transparent, very shiny sticky.
 The feet all black, all small 6-13, pale.
 Body above a little whitish, food green.
 Broken at 2 and 12; sides of thorax and
 s.v. region to 12 just. shaded with orange.
 Noeae white. Pupae greenish, 10 mm.
Dumfries All whitish caramel, eyes brown,
 not shiny, 6-annulate, large annulets
 centrally, small in incisures, i.e. 3rd
 large. No black; all yellow tinged,
 most strongly on sides of thorax.
Ant Oct 16 1898

Out fall 1898 but spoiled 920 8/8
-prattin?
joints

9A Neodipiron dyari

8/? eggs in 2-needled pine Roslyn Va
April 3 1898. Took some and mounted trees
Laid in the edge of the needle near the
tip 2 to 4 all on same side, separate
by 3 or 4 times their own length, swollen,
whitish, the edge of egg exposed is slit.
Oblivious, 2x as long as wide and occupying
1/2 the width of the needle. Smooth slightly
yellowish, the leaf discolored to near same
tint for a minute area around.

Hatched Apr 7 and got in a bunch at end of
needle. Hd round, higher than wide, shiny
jet black w. 5 dots. Two feet large & spindly
black; body slender, tapering with small
distinct abd. feet 6-13; segs. finely annulate,
dull blackish obnoxious, pale s-r on
feet. No marks. Abd. 6 annulate later whitish
green, blackish only faintly in seg. incisions.

Shed Apr 12 Hd 7 shiny water, black, higher
than wide. Segs. finely annulate with numerous

Nov 1910

Robur

minute black points, yellowish green,
slightly shaded darker in a geminate d.
line & a more distinct lateral one.

The feet black, green in joints; abd feet 6-12
13, short but very functional. Whisker things
gregarious. Segs 5 or 6 annulate(?) and at
least 4 rows of joints per seg. (hard to see)

Shed Apr 15 Hd 1.2 & the feet shiny black.

Body whitish yellow, ended, a distinct
addorsal & lateral blackish green shade
2nd-13. 3 rows of black shiny joints per seg.
on 1, 2, 4 of the fine indistinct 6 annulate.
Many also on anal flap & s-r folds.

Dorsal vessel lined with yellow membrane

Shed Apr 19 Hd 1.4 with the feet shiny black.

Segs 6 annulate black points distinct & numerous
on 1, 2, 4. Body greenish yellow, smoky
1st & 2nd & 3rd. Bands not nearly out
end of 2 but covering anal flap, varying in
distribution in different specimens.

Variable, faint or beamed marks. Anal

Some exactly = 7T

Larva never white, always yellowish
Spots scarcely graduated, rather irregular
Pluteus with distinct markings, 2 dark
shaded large patches. sd or lateral
stripe must be distinct or only sd present.
In one a broken S-V stripe along lower
S-V folds. In this stripe nearly black and
anal plate solidly shaded.

Shed Apr 22 Hds 1.8 Hd shiny black.

the feet black, abd. 6-12, 13. Body mod-
erately thick, uniform; segs 6 annulate
black setae very minute. Body yellowish
a broad distinct black sd stripe, varying
grad. & giving two large contiguous spots
on anal flap. a lat. row of spots
1 per seg (annulets ²⁻⁴), narrow black
spots at bases of abd feet (lower S-V fold)
forming almost a continuous line.

Another sd & lat bands both solid &
black, black dashes above the nape & on
lower S-V folds. Upper S-V fold more yellowish

Apr 25 (Swimming jacket) Hd whitish, annulets

lined, eyes black 1.4. Segs 6, setae 1-2-4 fine

Body solid pale yellowish all smoky

lined, sd & lat bands smoky black

broken, all a little waxy. The feet pale


Anal patches smoky black addorsal a
narrow, representing upper edge of sd band

Spring Apr 26

9B

Last years Emma falls on a slender stem
lanky willow giving a copy of a gully

Rushy M., April 18 1898. In the
main stem below origin of a branch

 in the middle of years growth, char-
acter elliptical 20x7 mm, a
woody swelling of twig 3x diameter
of stem same color as bark or a
trifle greenish. Cavity about size of
an empty bottle length of gall
stem elliptical, divided with a little
humid silk. Empty or with pupae.

Pinus virginiana

Bred
Mar 9 1900
←

Apr 22 1898

9C

Brought in a pine for 9A and found wriggling in jar
after several days. Had no sign of eating.

Larva like but no anal prongs. Had small
faint brownish ed. around mouth. nearly
white, eye very small, black, antennae
distinct & quite long. w. about 4 mm.

Body subcylindrical, venter a little flattened
s-v fold moderate, distinct. 7th feet
short and anal functionless; abdominal
marking. Segs obscurely 3-annulate
anal plate > round & a little pointed
slightly projecting and a little brownish
crumpled, smooth, sloping, a little
ridged before it on 13 trans. There is
a little thickened, the whole body quite
robust. all opaque white, waxy, no
marks. Length 4 1/2 mm. (wiggled and but
fell off leaves. Apparently full fed and empty)
white fat attached to stomach under back & just
as same wiggles. More inside young of
flavor of 2-needled pine, 1 in a flower
coming out before same blossoms.
Eat out a portion making the flower
feel soft to touch. ^{Does no sign till came out}

Doubleless *Xyela minor* Nutt.

Stamineate
armeria

Pteronotus mendicatus

9D = 3B

Egg and I on melons (chambray) but starts by water
Anacostia D.C. May 12 1898. Egg D ovoid

dark cut under upper epidermis 1.5 x .7 mm
near edge of leaf ^{& towards tip} solitary. Egg clear water
1.4 x .6, soft, somewhat irregular in shape

Leaf slightly depressed & egg forming a slight
prominence below but green and not swollen

Leaf green after hatching, below as before, above
the broken fibrous membrane. Larva begins

eating a round hole in leaf, sitting on edge
of hole. Hd. 3 ± pale greenish brown, eye black,

7th feet large, black, abd very small, 6-11.

Segs faint 4-annulate smooth, reddish green, not
shiny. Small anal plate and distinct blunt

prong black. No marks. Sit S-shape, wheels.

Another May 13 Hd 6 ^(shad. 4) pale greenish, a horn shape
in median anterior and not from eye, eye

black. Body reddish green. Head pale green
the feet pale, faint black marked at base

anal pl. colorless, but prongs black. Segs irregular
in distinct 3-annulate. no setae feet 6-11

Ther May 15 Hd 1.15 green a brown cloud of fine
eye and a center of head, eye black. mouth
brown. Body green, creased, showing annulate
on segments, anal pump dusky, feet pale.

Ther May 17 Hd 1.4 green a blackish streak
a vertex a fine eye. Body clear green
from head, smooth, scarcely annulate,
feet 6-11; held down to leaf; anal
pump distinct dusky. Scattered pale
sd feet, having dorsal a shade darker,
the edges slightly defined & the feet.

One from May 18 Hd 1.15 3 trunk and 7
The 1.8 mm body are 16 mm long and
still eating. Thin yellow cocoon.

Big one opening May 20

Out May 25 1898 ♀

9E

On Clethra alnifolia Southaven L.I.
Not mat. and not seen to feed (cf. Poc-
ulstonea inferentia) Hd. whitish with
slight brown, eye narrowly black.
w 1.3 mm. Cylindrical, slender, sitting
on venter on back of leaf, feet 6-13
all neat light green, immaculate,
a slight white brown which forms
a distinct white sd band on each
side. Segs nearly 6-annulate. Spread
minute, dark.

Swimming just at June 24. All away pale
green, head whitish, eye black, hd
shiny. Segs finely annulate. No marks

~~82~~ 9E 9E Out Apr 26 1899
Poculstonea inferentia ♀

First May 22. 1899
Phosphorus irregularis n. sp.
 an *C. aequata* n. sp. ?
 F = N

What is ventral, pigmentation. Body
 very dark and more slender. Body
 with a smooth surface. Body
 dark black, very shiny. First joint of
 3. Many white hairs. First joint of
 second joint of 3. First joint of 3.
 Second joint of 3. First joint of 3.
 Third joint of 3. First joint of 3.
 Fourth joint of 3. First joint of 3.
 Fifth joint of 3. First joint of 3.
 Sixth joint of 3. First joint of 3.
 Seventh joint of 3. First joint of 3.
 Eighth joint of 3. First joint of 3.
 Ninth joint of 3. First joint of 3.
 Tenth joint of 3. First joint of 3.
 Eleventh joint of 3. First joint of 3.
 Twelfth joint of 3. First joint of 3.
 Thirteenth joint of 3. First joint of 3.
 Fourteenth joint of 3. First joint of 3.
 Fifteenth joint of 3. First joint of 3.
 Sixteenth joint of 3. First joint of 3.
 Seventeenth joint of 3. First joint of 3.
 Eighteenth joint of 3. First joint of 3.
 Nineteenth joint of 3. First joint of 3.
 Twentieth joint of 3. First joint of 3.
 Twenty-first joint of 3. First joint of 3.
 Twenty-second joint of 3. First joint of 3.
 Twenty-third joint of 3. First joint of 3.
 Twenty-fourth joint of 3. First joint of 3.
 Twenty-fifth joint of 3. First joint of 3.
 Twenty-sixth joint of 3. First joint of 3.
 Twenty-seventh joint of 3. First joint of 3.
 Twenty-eighth joint of 3. First joint of 3.
 Twenty-ninth joint of 3. First joint of 3.
 Thirtieth joint of 3. First joint of 3.
 Thirty-first joint of 3. First joint of 3.
 Thirty-second joint of 3. First joint of 3.
 Thirty-third joint of 3. First joint of 3.
 Thirty-fourth joint of 3. First joint of 3.
 Thirty-fifth joint of 3. First joint of 3.
 Thirty-sixth joint of 3. First joint of 3.
 Thirty-seventh joint of 3. First joint of 3.
 Thirty-eighth joint of 3. First joint of 3.
 Thirty-ninth joint of 3. First joint of 3.
 Fortieth joint of 3. First joint of 3.
 Forty-first joint of 3. First joint of 3.
 Forty-second joint of 3. First joint of 3.
 Forty-third joint of 3. First joint of 3.
 Forty-fourth joint of 3. First joint of 3.
 Forty-fifth joint of 3. First joint of 3.
 Forty-sixth joint of 3. First joint of 3.
 Forty-seventh joint of 3. First joint of 3.
 Forty-eighth joint of 3. First joint of 3.
 Forty-ninth joint of 3. First joint of 3.
 Fiftieth joint of 3. First joint of 3.
 Fifty-first joint of 3. First joint of 3.
 Fifty-second joint of 3. First joint of 3.
 Fifty-third joint of 3. First joint of 3.
 Fifty-fourth joint of 3. First joint of 3.
 Fifty-fifth joint of 3. First joint of 3.
 Fifty-sixth joint of 3. First joint of 3.
 Fifty-seventh joint of 3. First joint of 3.
 Fifty-eighth joint of 3. First joint of 3.
 Fifty-ninth joint of 3. First joint of 3.
 Sixtieth joint of 3. First joint of 3.
 Sixty-first joint of 3. First joint of 3.
 Sixty-second joint of 3. First joint of 3.
 Sixty-third joint of 3. First joint of 3.
 Sixty-fourth joint of 3. First joint of 3.
 Sixty-fifth joint of 3. First joint of 3.
 Sixty-sixth joint of 3. First joint of 3.
 Sixty-seventh joint of 3. First joint of 3.
 Sixty-eighth joint of 3. First joint of 3.
 Sixty-ninth joint of 3. First joint of 3.
 Seventieth joint of 3. First joint of 3.
 Seventy-first joint of 3. First joint of 3.
 Seventy-second joint of 3. First joint of 3.
 Seventy-third joint of 3. First joint of 3.
 Seventy-fourth joint of 3. First joint of 3.
 Seventy-fifth joint of 3. First joint of 3.
 Seventy-sixth joint of 3. First joint of 3.
 Seventy-seventh joint of 3. First joint of 3.
 Seventy-eighth joint of 3. First joint of 3.
 Seventy-ninth joint of 3. First joint of 3.
 Eightieth joint of 3. First joint of 3.
 Eighty-first joint of 3. First joint of 3.
 Eighty-second joint of 3. First joint of 3.
 Eighty-third joint of 3. First joint of 3.
 Eighty-fourth joint of 3. First joint of 3.
 Eighty-fifth joint of 3. First joint of 3.
 Eighty-sixth joint of 3. First joint of 3.
 Eighty-seventh joint of 3. First joint of 3.
 Eighty-eighth joint of 3. First joint of 3.
 Eighty-ninth joint of 3. First joint of 3.
 Ninetieth joint of 3. First joint of 3.
 Ninety-first joint of 3. First joint of 3.
 Ninety-second joint of 3. First joint of 3.
 Ninety-third joint of 3. First joint of 3.
 Ninety-fourth joint of 3. First joint of 3.
 Ninety-fifth joint of 3. First joint of 3.
 Ninety-sixth joint of 3. First joint of 3.
 Ninety-seventh joint of 3. First joint of 3.
 Ninety-eighth joint of 3. First joint of 3.
 Ninety-ninth joint of 3. First joint of 3.
 One hundred joint of 3. First joint of 3.

10A

Lyda? egg on blue beech, Calaveras, Cal.
 Apr 30 1899. Cylindrical, ends rounded
 smooth, slightly shiny, white with strong
 blue green tint, opaque 1.8, width .6 mm
 Hatched May 3, cut a slit and rolled a part of
 leaf with slight web. Hd round white, eye black,
 mouth brown, w. .53 mm. Antennae about 1 before
 cellae, long, jointed. Body whitish, translucent,
 anal stylet long, similar to antennae, not colored
 and not so distinctly rounded, whitish.
 First May? Hd 3 shiny, translucent, brown tinted, eye
 black, mouth brown, body pieces of brown period
 a little whitish, shiny and smooth, legs whitish
 two feet antenna and stylet whitish.
 Second May? Hd 11 pale whitish brown, shiny, translucent
 eye black, mouth brown, and jointed about 6 joints
 and colored. Translucent, a little whitish, not
 showing the green foot. A narrow black line
 a little dark and one before foot of joint 2, no
 other marks. anal plate and pump all pale.
 [died]

10 B

Lyde? eggs in willow catkin, hatched
Apr 30 1899. Like 10 A but several together
a separate base but all at one of same
short. Cylindrical, ends rounded. Pale
yellowish white, slightly shiny 1.4 x .4 mm
hatched but would not feed.

10 C

Stimate hole of just like the *Sclerocera*
prunivora but in *Stourmea* tent at
Lake John bridge, Md. May 7 1899.

Hd. 6 prominent, round, green, eye black, mouth brown
antenna very short obscure. Body green, seg. black,
3 annulate, 3 annulate, 4 annulate and protrusible
feet below, shiny, large blackish ventral at base
of thoracic feet. seg pale, abd. segs very small.

Hd. 4 faint brownish green, eye black. Body clear green
with a light testaceous with distinct black marks at
base. seg all green, annulate, abd. segs very small.

Hd. 9 prominent, rounded, green, genae blackish, eye
black, antenna rudimentary, a small black
hairs smaller than ocellus, colorless. Body clear
green translucent, 3 annulate, smooth with a
5-6 ridge, no perceptible hairs and pale
green with 2 points, 2 points at side of ann.
and feet protrusible, segs all very short 6-11.

2 faint testaceous spots at base of the feet but
seg all without annular. 8 dorsal veins
distinct + subvent line narrow and obscure.

May 7 Hd. 11 all clear green, genae black, upper
small purple testaceous. feet 3-4 annulate, green
present, green. 11 drooping, antennae rudimentary
base of feet testaceous tinged; abd 6-11 13 very small
perceptible black annulate.

May 9 Hd. 14 Green clear, but faint testaceous
on the lobes, eye black markedly, antenna only
a scar. The feet testaceous at base.

seg 6-11 13 very small. segs in distinct 3 annulate
smooth, greenish, all as before. anal plate
green and there above brown. segs 6-11
testaceous below green. seg. glands colorless.
dorsal testaceous protrusible green, base all green.
May 11 segs even of brownish green with
testaceous.

10 D

Little caterpillar feeding voraciously on *Carpinus* John Lind. Many eating a hole in needles! Head body curved S-shape. Hd. smooth between, a dark lat. streak, eye black, shiny; w. 4 mm. Body translucent whitish, faint annulate (about 3) shiny. feet pale, small as swollen. feet 6-11, 13 not used. Aug 9. Hd. 7 whitish, slightly testaceous, legs black, most with white patches! Root colorless, the foot green, faintly annulate, 13 enlarged, not used. Antennae rudimentary, joints. May 12. Hd. 1.0 rounded greenish, shining, a black streak on each side and an oblique line on vertex. eye black. rudimentary antennae dark. Body translucent green. feet 5, 13 annulate. the feet clear white black annulate at the base. abd. feet short 6-11. 13 swollen with a pair of thick, swollen tipped clear anal prongs. Prothoracic line on dorsal most part contrasted. 14. Hd. 1.3. feet brownish green, a black band behind ocellus, and a brown line on vertex. Antennae obscure, 6 annulate. Body translucent green, a dorsal line shining at all. Prothoracic line fine. feet 6-11 distinct, small, 12-13 a little enlarged, the hollows green, brown at tip. The feet clear testaceous at base. Antennae rudimentary, not jointed. Died = *Pteronotus strigatus* Mord?

733

Four odes in beech and black oak Rosalyn 92. No. 2. 98. may be possible but to make sure follow each.

733 A 812. trial, long, narrow, behind, ridges well marked with setae and pale spines. Skin finely shagreened granular, all over, depressed spaces not distinct. Shed Aug 9 well 2' spined. *Pteronotus* tapering behind. Stage III. Shed Aug 12, 1/2 (not 1)

Aug 6	1.5	cat
" 7	1.6	"
" 10	1.7	cat
" 11	2.0	"
" 12	2.1	cat
" 13	"	"
" 14	2.3	cat
" 15	2.5	still
" 16	3.0	cat

733 B Skin all fine shagreened granular, the
 1st spines numerous on lat. ridge,
 less on sd ridge and a very few
 under mes in d. space. Fine granules
 in the depressed spaces hollows
 not, incisures well marked (fasciola)
 shed Aug 8 Like fasciola III

Aug 6	1.6	cat
" 7	2.2	cat
" 8	2.2	shed
" 9	2.2	cat
" 10	2.6	"
" 11	2.9	"
" 12	2.6	shed
" 13	"	"
" 14	2.7	cat
" 15	2.6	"

733 C Shape of fasciola, tail quadrate, ridges
 low, tuberculate. All finel pointed
 shagreened granular, space not
 differentiated. Ridge bear setae and
 2nd spines most numerous on lat ridge.
 shed Aug 8 Like fasciola III. The

Aug 6	2.2	shed
" 7	"	"
" 8	"	"
" 9	2.9	cat
" 10	2.8	shed
" 11	"	"
" 12	2.7	shed
" 13	3.3	cat
" 14	3.1	"
" 15	3.7	"

sq. incisures show neatly.
 shed Aug 8 Like fasciola but no marks
 whitish green from below, rather
 broad in d. space, tail quadrate.
 on sd line no rings. Skin as far
 as possible

733D Like T. fasciola IV. Fine shagreen

Aug 6	3.1	tip
" 7	3.3	"
" 8	4.0	cat
" 9	4.3	"
" 10	4.2	tail
" 11	"	"
" 12	4.3	cat

True fasciola

granules mixed with the much larger conical 2^d spines which are the real normal granules.

The shagreen is much too fine being like that of young basoni and tex.

733E

Aug 7	2.6	tail
" 8	2.5	"
" 9	2.7	cat
" 10	3.2	"
" 11	3.1	tail
" 12	"	"
" 13	3.7	cat
" 14	4.2	"
" 15	4.1	"

Got another on black oak Aug 7. Same 2^d spines on both ridges.

[also a 4.9 with regular stage V fasciola on chestnut]

- fasciola 1. m. l.

More black oak D.B. Sept 10 1900.
 And July 14 1901. Carama melana Cat 17476
 734 July 14

Pyronophids on red-bud (Cornus canadensis)
 Lynch, Va. Aug. 1195. All (50-60) are one
 short but separated, scattered on the
 backs of successive leaves. Leaf near
 tip had a waxy mass of egg covering.
 Hl. 6 ± small shiny testaceous; mouth darker
 3 with 4 hairs 4-13 with three. Hair sparse, bristly
 pale mixed with long soft white ones.
 Body deep black 5-11 h @ shading into
 dark red-brown 3-4 and 12-13. 5-8 region pale
 yellowish and all the hairs contrasting
 pale yellow. Long pointed glands behind
 the spiracles. Interscap. d. and lat. white
 glandular spots. Throat flattened; 2 hood-like
 with no hairs on it but hairy. Skin finely
 close granular. Spines have tubercular
 hollow base. Feet short & small. Venter
 Shed Aug 8 Hds. 8 ± The soft curving white hair
 form a halo all around for 3 mm. The
 stiff hairs are short. Color the same. The

Sept 4 last held to J.

stiff hairs are pointed, smooth with large
bases but not bulbous or cross-banded; the
long hairs are finely feathery barbed beyond
the smooth basal part. Skin fine granular
d. color ends above unit III, narrow, down purple
in the incision. d. & lat. whitish spots around
the glandular dots. Hood and anal tip yellow.

Shed Aug 14 *Pygmaepid chaps.* Hd. 1.1± Body pale
yellow s-v. hood, anal tip and unit with a
circular area around each. On 3-5, 12-13 deep
brown-red d. & ③ shaded, rising close to the unit.
On 6-11 deep black, cut by the round holes sur-
rounding ① and incised by semi-circular
holes for units ②; not reaching below. Apical
spaces (1) and (2) large white. ^{small brown edge} on joint 2

A yellow papilla by each spiracle, 4 units or there-
abouts on abd. segs. including 13. A few hairs on foot base
Hairs of 2 kinds, short & spiny, long and feathery
but very fine all as before. Feet short, normal

Shed Aug 15 Hd 1.5± The same. red 3-4 12-13 black

Shed Aug 26 Hd 2.0± Same. Hair 12 mm. ^{black} ^{white}
ad. small all. feet also present small. Short hairs
have large bases in bases. Has white feet into 5/1.

Sept 18 1905

735

Admetia sp? found by J. at Glen-
dale? L. J. Sept. 1898. Larva

Sept. 9	12.5	cat
" 10	13.0	"
" 11	13.0	"
" 12	-	"

Spinuloides but narrower,
less elongated at 5; horns of
13 long, prolegs 12-13 are
which also exceed 11.
Widening of d. purple

ward all subequal, 5 widening each
practically white, no purple and
series of 6 and 7. Calliops reddish
and side lines, but seg. 12, well
developed on 12 and 13. (See paper)
The color of dorsal (ward) is a blue
purple from *Spinuloides*, less red-
dish in narrow.

736

Chrysaera very near *unicornis* from
 Van Dusen's collection Sept 16, 1898
 Hd light brown, subventral with dark
 with straight subventral rather broad
 ventral line. Body is 5. Head
 punctate, 1-12 high, 1-2 low. Dorsal
 side 3-4 green, brown dotted, rest red
 brown, dotted & mottled. A faint
 lat line below but all the
 region from iii to last uniform without
 line. D. & lat line obsolete shaded
 5-8 striped spiracles and several a
 trace of the 1-10 mark a 10 on 6 lat
 lighter mottling. 12-13 dark d. to
 subventral light. Feet concolorous.
 obs. with clearing.
 Spun Sept 17

737

Butterfly larva running in the
 road, park, Washington D.C.
 Sept 27, 1898. Spun. hd black; occul
 ary on 2, ^{except 5-v} 5 on 3-4, 6 on 5-12 i.c
 mottled. sd, lat. substy, 2 5-v in
 line, only one 11, none 12; 2 in line 13
 Body black, yellow dotted; an
 additional diffuse broken yellow band
 large orange spots around base of ③
 ④ breaking narrow lat and substy
 pale yellow lines. Spun blue black
 except 2 5-v on 2 and the lower pair
 3-11. Hd rough, black on face, neck
 orange both on hd behind and 2-4
 front.
 Spun trip to J at once.
 Oct Oct. 6. *Junonia coenia*

black line in the center of head
Blame for coll. S. tabatry

738 = 447

noctuid egg on leaf of willow leaf, Calce
John W. April 30 1899. Circular, flattened
48± ribs diminishing by intercalation
thick, flattened, marked by cross striae. Slightly
shiny, translucent whitish. D. .6 h. .7
Hatched May 3 and cast greenish in midrib.

1st moult, bilobed, shiny whitish, green brown
ocelli 6, black distinct. Body slender
whitish green from food. feet 7-8 annulate.
Setae robust, very thick, many in line, short,
white, tubercles small large but conspicuous.
At end of stage, shiny opaque whitish, feet
annulate, seg. 3-annulate setae obscure.
Shed May 6 Hd. 6 bilobed shiny, with testaceous
tubercles black, dusky, slender, whitish green
opaque, supracaudal as white folds, 14 distinct,
no mottles but very faint white lat. line
feet 7-8 annulate shed the next noctuid time
white. Tubercles head like, setae fine, 18 & below
more edge of ocellus

Shed May 11 Hd. 1.2 bilobed shiny, soft green, setae
fine, measures deep, folded, body
annulate. S. d. 1-2-3-4-5-6-7-8-9-10-11-12-13-14-15-16-17-18-19-20-21-22-23-24-25-26-27-28-29-30-31-32-33-34-35-36-37-38-39-40-41-42-43-44-45-46-47-48-49-50-51-52-53-54-55-56-57-58-59-60-61-62-63-64-65-66-67-68-69-70-71-72-73-74-75-76-77-78-79-80-81-82-83-84-85-86-87-88-89-90-91-92-93-94-95-96-97-98-99-100-101-102-103-104-105-106-107-108-109-110-111-112-113-114-115-116-117-118-119-120-121-122-123-124-125-126-127-128-129-130-131-132-133-134-135-136-137-138-139-140-141-142-143-144-145-146-147-148-149-150-151-152-153-154-155-156-157-158-159-160-161-162-163-164-165-166-167-168-169-170-171-172-173-174-175-176-177-178-179-180-181-182-183-184-185-186-187-188-189-190-191-192-193-194-195-196-197-198-199-200-201-202-203-204-205-206-207-208-209-210-211-212-213-214-215-216-217-218-219-220-221-222-223-224-225-226-227-228-229-230-231-232-233-234-235-236-237-238-239-240-241-242-243-244-245-246-247-248-249-250-251-252-253-254-255-256-257-258-259-260-261-262-263-264-265-266-267-268-269-270-271-272-273-274-275-276-277-278-279-280-281-282-283-284-285-286-287-288-289-290-291-292-293-294-295-296-297-298-299-300-301-302-303-304-305-306-307-308-309-310-311-312-313-314-315-316-317-318-319-320-321-322-323-324-325-326-327-328-329-330-331-332-333-334-335-336-337-338-339-340-341-342-343-344-345-346-347-348-349-350-351-352-353-354-355-356-357-358-359-360-361-362-363-364-365-366-367-368-369-370-371-372-373-374-375-376-377-378-379-380-381-382-383-384-385-386-387-388-389-390-391-392-393-394-395-396-397-398-399-400-401-402-403-404-405-406-407-408-409-410-411-412-413-414-415-416-417-418-419-420-421-422-423-424-425-426-427-428-429-430-431-432-433-434-435-436-437-438-439-440-441-442-443-444-445-446-447-448-449-450-451-452-453-454-455-456-457-458-459-460-461-462-463-464-465-466-467-468-469-470-471-472-473-474-475-476-477-478-479-480-481-482-483-484-485-486-487-488-489-490-491-492-493-494-495-496-497-498-499-500-501-502-503-504-505-506-507-508-509-510-511-512-513-514-515-516-517-518-519-520-521-522-523-524-525-526-527-528-529-530-531-532-533-534-535-536-537-538-539-540-541-542-543-544-545-546-547-548-549-550-551-552-553-554-555-556-557-558-559-560-561-562-563-564-565-566-567-568-569-570-571-572-573-574-575-576-577-578-579-580-581-582-583-584-585-586-587-588-589-590-591-592-593-594-595-596-597-598-599-600-601-602-603-604-605-606-607-608-609-610-611-612-613-614-615-616-617-618-619-620-621-622-623-624-625-626-627-628-629-630-631-632-633-634-635-636-637-638-639-640-641-642-643-644-645-646-647-648-649-650-651-652-653-654-655-656-657-658-659-660-661-662-663-664-665-666-667-668-669-670-671-672-673-674-675-676-677-678-679-680-681-682-683-684-685-686-687-688-689-690-691-692-693-694-695-696-697-698-699-700-701-702-703-704-705-706-707-708-709-710-711-712-713-714-715-716-717-718-719-720-721-722-723-724-725-726-727-728-729-730-731-732-733-734-735-736-737-738-739-740-741-742-743-744-745-746-747-748-749-750-751-752-753-754-755-756-757-758-759-760-761-762-763-764-765-766-767-768-769-770-771-772-773-774-775-776-777-778-779-780-781-782-783-784-785-786-787-788-789-790-791-792-793-794-795-796-797-798-799-800-801-802-803-804-805-806-807-808-809-810-811-812-813-814-815-816-817-818-819-820-821-822-823-824-825-826-827-828-829-830-831-832-833-834-835-836-837-838-839-840-841-842-843-844-845-846-847-848-849-850-851-852-853-854-855-856-857-858-859-860-861-862-863-864-865-866-867-868-869-870-871-872-873-874-875-876-877-878-879-880-881-882-883-884-885-886-887-888-889-890-891-892-893-894-895-896-897-898-899-900-901-902-903-904-905-906-907-908-909-910-911-912-913-914-915-916-917-918-919-920-921-922-923-924-925-926-927-928-929-930-931-932-933-934-935-936-937-938-939-940-941-942-943-944-945-946-947-948-949-950-951-952-953-954-955-956-957-958-959-960-961-962-963-964-965-966-967-968-969-970-971-972-973-974-975-976-977-978-979-980-981-982-983-984-985-986-987-988-989-990-991-992-993-994-995-996-997-998-999-1000-1001-1002-1003-1004-1005-1006-1007-1008-1009-1010-1011-1012-1013-1014-1015-1016-1017-1018-1019-1020-1021-1022-1023-1024-1025-1026-1027-1028-1029-1030-1031-1032-1033-1034-1035-1036-1037-1038-1039-1040-1041-1042-1043-1044-1045-1046-1047-1048-1049-1050-1051-1052-1053-1054-1055-1056-1057-1058-1059-1060-1061-1062-1063-1064-1065-1066-1067-1068-1069-1070-1071-1072-1073-1074-1075-1076-1077-1078-1079-1080-1081-1082-1083-1084-1085-1086-1087-1088-1089-1090-1091-1092-1093-1094-1095-1096-1097-1098-1099-1100-1101-1102-1103-1104-1105-1106-1107-1108-1109-1110-1111-1112-1113-1114-1115-1116-1117-1118-1119-1120-1121-1122-1123-1124-1125-1126-1127-1128-1129-1130-1131-1132-1133-1134-1135-1136-1137-1138-1139-1140-1141-1142-1143-1144-1145-1146-1147-1148-1149-1150-1151-1152-1153-1154-1155-1156-1157-1158-1159-1160-1161-1162-1163-1164-1165-1166-1167-1168-1169-1170-1171-1172-1173-1174-1175-1176-1177-1178-1179-1180-1181-1182-1183-1184-1185-1186-1187-1188-1189-1190-1191-1192-1193-1194-1195-1196-1197-1198-1199-1200-1201-1202-1203-1204-1205-1206-1207-1208-1209-1210-1211-1212-1213-1214-1215-1216-1217-1218-1219-1220-1221-1222-1223-1224-1225-1226-1227-1228-1229-1230-1231-1232-1233-1234-1235-1236-1237-1238-1239-1240-1241-1242-1243-1244-1245-1246-1247-1248-1249-1250-1251-1252-1253-1254-1255-1256-1257-1258-1259-1260-1261-1262-1263-1264-1265-1266-1267-1268-1269-1270-1271-1272-1273-1274-1275-1276-1277-1278-1279-1280-1281-1282-1283-1284-1285-1286-1287-1288-1289-1290-1291-1292-1293-1294-1295-1296-1297-1298-1299-1300-1301-1302-1303-1304-1305-1306-1307-1308-1309-1310-1311-1312-1313-1314-1315-1316-1317-1318-1319-1320-1321-1322-1323-1324-1325-1326-1327-1328-1329-1330-1331-1332-1333-1334-1335-1336-1337-1338-1339-1340-1341-1342-1343-1344-1345-1346-1347-1348-1349-1350-1351-1352-1353-1354-1355-1356-1357-1358-1359-1360-1361-1362-1363-1364-1365-1366-1367-1368-1369-1370-1371-1372-1373-1374-1375-1376-1377-1378-1379-1380-1381-1382-1383-1384-1385-1386-1387-1388-1389-1390-1391-1392-1393-1394-1395-1396-1397-1398-1399-1400-1401-1402-1403-1404-1405-1406-1407-1408-1409-1410-1411-1412-1413-1414-1415-1416-1417-1418-1419-1420-1421-1422-1423-1424-1425-1426-1427-1428-1429-1430-1431-1432-1433-1434-1435-1436-1437-1438-1439-1440-1441-1442-1443-1444-1445-1446-1447-1448-1449-1450-1451-1452-1453-1454-1455-1456-1457-1458-1459-1460-1461-1462-1463-1464-1465-1466-1467-1468-1469-1470-1471-1472-1473-1474-1475-1476-1477-1478-1479-1480-1481-1482-1483-1484-1485-1486-1487-1488-1489-1490-1491-1492-1493-1494-1495-1496-1497-1498-1499-1500-1501-1502-1503-1504-1505-1506-1507-1508-1509-1510-1511-1512-1513-1514-1515-1516-1517-1518-1519-1520-1521-1522-1523-1524-1525-1526-1527-1528-1529-1530-1531-1532-1533-1534-1535-1536-1537-1538-1539-1540-1541-1542-1543-1544-1545-1546-1547-1548-1549-1550-1551-1552-1553-1554-1555-1556-1557-1558-1559-1560-1561-1562-1563-1564-1565-1566-1567-1568-1569-1570-1571-1572-1573-1574-1575-1576-1577-1578-1579-1580-1581-1582-1583-1584-1585-1586-1587-1588-1589-1590-1591-1592-1593-1594-1595-1596-1597-1598-1599-1600-1601-1602-1603-1604-1605-1606-1607-1608-1609-1610-1611-1612-1613-1614-1615-1616-1617-1618-1619-1620-1621-1622-1623-1624-1625-1626-1627-1628-1629-1630-1631-1632-1633-1634-1635-1636-1637-1638-1639-1640-1641-1642-1643-1644-1645-1646-1647-1648-1649-1650-1651-1652-1653-1654-1655-1656-1657-1658-1659-1660-1661-1662-1663-1664-1665-1666-1667-1668-1669-1670-1671-1672-1673-1674-1675-1676-1677-1678-1679-1680-1681-1682-1683-1684-1685-1686-1687-1688-1689-1690-1691-1692-1693-1694-1695-1696-1697-1698-1699-1700-1701-1702-1703-1704-1705-1706-1707-1708-1709-1710-1711-1712-1713-1714-1715-1716-1717-1718-1719-1720-1721-1722-1723-1724-1725-1726-1727-1728-1729-1730-1731-1732-1733-1734-1735-1736-1737-1738-1739-1740-1741-1742-1743-1744-1745-1746-1747-1748-1749-1750-1751-1752-1753-1754-1755-1756-1757-1758-1759-1760-1761-1762-1763-1764-1765-1766-1767-1768-1769-1770-1771-1772-1773-1774-1775-1776-1777-1778-1779-1780-1781-1782-1783-1784-1785-1786-1787-1788-1789-1790-1791-1792-1793-1794-1795-1796-1797-1798-1799-1800-1801-1802-1803-1804-1805-1806-1807-1808-1809-1810-1811-1812-1813-1814-1815-1816-1817-1818-1819-1820-1821-1822-1823-1824-1825-1826-1827-1828-1829-1830-1831-1832-1833-1834-1835-1836-1837-1838-1839-1840-1841-1842-1843-1844-1845-1846-1847-1848-1849-1850-1851-1852-1853-1854-1855-1856-1857-1858-1859-1860-1861-1862-1863-1864-1865-1866-1867-1868-1869-1870-1871-1872-1873-1874-1875-1876-1877-1878-1879-1880-1881-1882-1883-1884-1885-1886-1887-1888-1889-1890-1891-1892-1893-1894-1895-1896-1897-1898-1899-1900-1901-1902-1903-1904-1905-1906-1907-1908-1909-1910-1911-1912-1913-1914-1915-1916-1917-1918-1919-1920-1921-1922-1923-1924-1925-1926-1927-1928-1929-1930-1931-1932-1933-1934-1935-1936-1937-1938-1939-1940-1941-1942-1943-1944-1945-1946-1947-1948-1949-1950-1951-1952-1953-1954-1955-1956-1957-1958-1959-1960-1961-1962-1963-1964-1965-1966-1967-1968-1969-1970-1971-1972-1973-1974-1975-1976-1977-1978-1979-1980-1981-1982-1983-1984-1985-1986-1987-1988-1989-1990-1991-1992-1993-1994-1995-1996-1997-1998-1999-2000-2001-2002-2003-2004-2005-2006-2007-2008-2009-2010-2011-2012-2013-2014-2015-2016-2017-2018-2019-2020-2021-2022-2023-2024-2025-2026-2027-2028-2029-2030-2031-2032-2033-2034-2035-2036-2037-2038-2039-2040-2041-2042-2043-2044-2045-2046-2047-2048-2049-2050-2051-2052-2053-2054-2055-2056-2057-2058-2059-2060-2061-2062-2063-2064-2065-2066-2067-2068-2069-2070-2071-2072-2073-2074-2075-2076-2077-2078-2079-2080-2081-2082-2083-2084-2085-2086-2087-2088-2089-2090-2091-2092-2093-2094-2095-2096-2097-2098-2099-2100-2101-2102-2103-2104-2105-2106-2107-2108-2109-2110-2111-2112-2113-2114-2115-2116-2117-2118-2119-2120-2121-2122-2123-2124-2125-2126-2127-2128-2129-2130-2131-2132-2133-2134-2135-2136-2137-2138-2139-2140-2141-2142-2143-2144-2145-2146-2147-2148-2149-2150-2151-2152-2153-2154-2155-2156-2157-2158-2159-2160-2161-2162-2163-2164-2165-2166-2167-2168-2169-2170-2171-2172-2173-2174-2175-2176-2177-2178-2179-2180-2181-2182-2183-2184-2185-2186-2187-2188-2189-2190-2191-2192-2193-2194-2195-2196-2197-2198-2199-2200-2201-2202-2203-2204-2205-2206-2207-2208-2209-2210-2211-2212-2213-2214-2215-2216-2217-2218-2219-2220-2221-2222-2223-2224-2225-2226-2227-2228-2229-2230-2231-2232-2233-2234-2235-2236-2237-2238-2239-2240-2241-2242-2243-2244-2245-2246-2247-2248-2249-2250-2251-2252-2253-2254-2255-2256-2257-2258-2259-2260-2261-2262-2263-2264-2265-2266-2267-2268-2269-2270-2271-2272-2273-2274-2275-2276-2277-2278-2279-2280-2281-2282-2283-2284-2285-2286-2287-2288-2289-2290-2291-2292-2293-2294-2295-2296-2297-2298-2299-2300-2301-2302-2303-2304-2305-2306-2307-2308-2309-2310-2311-2312-2313-2314-2315-2316-2317-2318-2319-2320-2321-2322-2323-2324-2325-2326-2327-2328-2329-2330-2331-2332-2333-2334-2335-2336-2337-2338-2339-2340-2341-2342-2343-2344-2345-2346-2347-2348-2349-2350-2351-2352-2353-2354-2355-2356-2357-2358-2359-2360-2361-2362-2363-2364-2365-2366-2367-2368-2369-2370-2371-2372-2373-2374-2375-2376-2377-2378-2379-2380-2381-2382-2383-2384-2385-2386-2387-2388-2389-2390-2391-2392-2393-2394-2395-2396-2397-2398-2399-2400-2401-2402-2403-2404-2405-2406-2407-2408-2409-2410-2411-2412-2413-2414-2415-2416-2417-2418-2419-2420-2421-2422-2423-2424-2425-2426-2427-2428-2429-2430-2431-2432-2433-2434-2435-2436-2437-2438-2439-2440-2441-2442-2443-2444-2445-2446-2447-2448-2449-2450-2451-2452-2453-2454-2455-2456-2457-2458-2459-2460-2461-2462-2463-2464-2465-2466-2467-2468-2469-2470-2471-2472-2473-2474-2475-2476-2477-2478-2479-2480-2481-2482-2483-2484-2485-2486-2487-2488-2489-2490-2491-2492-2493-2494-2495-2496-2497-2498-2499-2500-2501-2502-2503-2504-2505-2506-2507-2508-2509-2510-2511-2512-2513-2514-2515-2516-2517-2518-2519-2520-2521-2522-2523-2524-2525-2526-2527-2528-2529-2530-2531-2532-2533-2534-2535-2536-2537-2538-2539-2540-2541-2542-2543-2544-2545-2546-2547-2548-2549-2550-2551-2552-2553-2554-2555-2556-2557-2558-2559-2560-2561-2562-2563-2564-2565-2566-2567-2568-2569-2570-2571-2572-2573-2574-2575-2576-2577-2578-2579-2580-2581-2582-2583-2584-2585-2586-2587-2588-2589-2590-2591-2592-2593-259

740

Green larvae in a wet or miller; single
 Calm John Wad. May 9 1st 1.5 ± shiny black,
 brown above mouth & base antennae white.
 Body ^{translucent} white green. 1 greenish yellowish
 Cyl black, divided centrally and pale green
 on front edge, tubercles & also black.
 Thorax 2, 3 black, 4 green, no anal pl.
 Setae long, rather coarse, white, 10 and 11
 united; tubercles conical, glassy, not
 conspicuous though moderate size.
 Head raised & dark brown.

Collected May 13 - (9 specimens)

(On extension of the line not included)

10 E

Collected by Mr. Lockwell, Wash D.C. May 15 '99
 1st 1.6 on pale testaceous not shiny, eye black
 narrowly. Antennae entirely red-brown seg.
 1 straight seg. 6-segmented, small color
 tubercles on 2nd and 4th annulets. Feet 6-11
 translucent whitish green, a distinct greenish
 white d-line of edge of 1st seg. 3-12.
 Last behind is a general white shade of
 12-13. Prolonging. A distinct white seg.
 12 and 13-segmented, straight, rather broad,
 anal plate rounded, putose on this seg.
 no prepectal spines. A slight blackish
 shading on the thoracic sv ridge.

atomacera desim skin

July 2/99

10 F

Wp

Parking slips on large-leaved *Desmodium*
Rosa Lynn Va. June 24 1899. ^{back to} ~~on or near~~ ^{leaf}
Hd. mid, brownish green, shiny, scabrous, black spot
slightly notched; Antennae rudimentary. Body
overlaid flattened, sv region posteriorly flattened.
Foot 6-12, 13, rather slender. Segs with green
rounded areas like that tube on foot $\frac{1}{2}$ of
seg, sd, lat, stop (not) s-v. There are black
whisker, dark edged erect tubes from the tip of
which a round dark scabrous before the sd on
an ant 1 a tubercle with seta; also large st
on ant 2 but 2 tubercles (in one compound)
Below the sd & spiracle is a large tubercle
with 1 seta. The stig arise from upper edge
of a tubercle with 1 seta. sv from a large
tubercle forming projection of s-v ridge on
which are several setae. foot with small
setae. all the tubercles are shaded with
dusky black except in their center.
Segs obscurely 2 annulate, the annulate

minutely granular in the center.
Body otherwise green, shiny, smooth.
The glandular tubes form a row on ant,
^(1st ant. small fl. in smooth)
edge of each ant foot. on anal plate.
Hd. pale brown eye black. Body more
red more yellowish, yellow except for
the green foot, the tubercles only being
faintly shaded nothing conspicuous but
the black mottled tubes in 12 rows which
make the larva look dead spring. The
foot strongly though a little undersized
Hd 6 Setae, 2 annulate. antennae yellow
green, shiny, sparse black mottled.
I also found a pupa in a cocoon
of yellowish, ^{brownish} ~~white~~ ^{opaque} ~~white~~ ^{opaque} ~~white~~ ^{opaque}
scales. Section tubes abundant.
May 6 1899 99

IIA

Larva on plums, E. M. Dodge, Louis-
iana Mo., taken June 1, 1900.
Head round, obscure, faintly green
tinged; long antennae and eye
black. Body green, not shining,
2nd annulate, subventral gold. Body
obscure, c. 14, the feet, subventral
plate, 2 quadrate patches on an-
terial plate and anal styles
black. D. vent. dark green.

II B

Empoasca nematodes on Alder D.B.
June 7 1900. Abd. feet slender 5-11.
Head & prothorax 13. Segs 4th annulate.
1st & 2nd shiny solid orange red, eye
black. Body shiny bronzy greenish
black dorsally, obscure on green lat.
ventrally but the large tubercles
black. The feet except joints, abd.
subventral & anal pl. black. A series
of median ventral black blotches, anal
feet obscure. No tubercles d, but
setae on 2nd & 3rd annulets, 1 annulet large
2nd higher 3rd small; 5th a large tubercle
behind spiracle and one on each
SV fold & one above feet before.
June 23-24 1900

11 C

Gregarious. Described in *Black Wick*
Strong River Rd, Va July 31, 1900.

Hds 2.1 high round flat before & with
4 denticles below & 2 above, shining black.
Body cylindrical, feet small 6-11, 13.
Head black and fringed narrow.
Segs irregular, 4 annulets, setae a short
downy shining black to spinous
narrowed at neck, and fl deep
black. Subventer translucent yellow
with black annulets, a lat 5-6 fold
venter a each seg black, black
joint but shining, in a D and the
post edge set trans yellowish.
The feet black except at joints.
Grounds brown yellowish, spinous downy
black. July 2 Hd 2.5 50 but the
for all pale and no black on 5-6
folds.

12 A

Solitary. Described in *crane* *Leaved*
Cottonwood Golden Col, May 29 1901
Hd 6-11 more 13. Hd round, green, fine
downy (puffed) on vertex and in a D, ocellar
black, antenna a dark spot, blackish.
Body large, 6 annulets, 2 or 3 large
translucent green, not shining, a small
blackish. Prothorax brown shining whitish
the venter the prolegs, the anal fl.
a little angled at corners.
May 31 3000, rather more shining

These certainly came out through labels
was in different jar. May 1902

12B

Leaf miner in cottonwood, Denver Col
June 1901 Long, blotch mine in range
of leaf. Larva at rounded pale between
Δ larva almost head shaped; yellow black,
white line, ant. short. Body robust, flat
ventrally, more arched at top. Little hump.
Sole whitish, between tentacles, a plate patch
down side up. The feet short pale. Ab. 12, 13
In mine 1st flattened, rounded, apex wide &
Δ larva, head shaped below. The upper part small
and abruptly rounded off. Ant. short, in distance
3-jointed, conical; color brownish rounded with
brown shading, ocelli short black, plus dark
A. black ring 1 short, uniform, flattened ventral but
quite black, through a little thicker. 13 slightly
smaller, rounded. Cth indistinct. 14 dark
one, rounded at foot corner, blackest at apex.
No anal pl. or process. Smooth, shiny. Head
white from food, feet obscure green. Two feet
3-jointed with a claw black, small principally
laterally, a ventral black band on 2nd joint
centrally; a rounded patch on 3rd. Feet 12 with
marked before by deep black transverse one on 6-12
a black circle surrounding the rounded part of
13. Labrum black w. brown.

12C

On 3-5 fingered lupine (993 plant) Platte
County Col., June 7 1901 (all of mine in
relatively yellowish net under crown of
the plant; larvae and mine in crown)
1st greenish brown above, a diffuse
black patch in Δ and no at side part.
Foot on 6-10 & 13, peculiarly on 11 as very
thickened in J. Green with 3 rows of
small round pale central black
spots for seg. midal row slight
and 4 line ventrad. 5th region more
yellowish green, all even, tubercles
on 6 feet. The feet short black
and pl an approximate ventral
on 6th.

not June 15 1901

12D

Edgemonia ciliatella in cotton, Platte
 Canon Col., June 7, 1901. Feet 6-11, 13
 red and green, ocellus black. Body
 rather straight with rounded snout
 large anal flap. Feet showing whitish
 green with a whitish strip. Wings
 composed of pariah on the forewings
 showing 2-3 annulate lines. Markings
 feet all green.

June 11 Platte & J. Feet blackish red
 wings

12E

growing on a 2-needled pine, Cheyenne
 Gulch, Golden, Col., June 10, 1901
 & pale brown with a broad black bar
 on Δ . Ocellus rudimentary ant. and
 mouth black ringed. Feet 6-13, legs pink
 annulate, the feet black at base. Setae
 on needles brown. Successive whitish
 & faint gray green red lines and a
 narrow black bar. on Δ ^{later blackish}
 fold with a faint gray green strip. It is
 a row of many black dashes along base
 of feet. Body taper behind. Pedal
 dashes form a straight line.
 This June 17 (ultimate) (H) whitish annu-
 lar, no spots eye black annulate brown
 Body many whitish green & a narrow
 greenish blackish line and broad black
 band. Setae all narrow the whitish
 change gone.

12 F

Flat a ventral in *musculum* *solida*
col. June 19 1901. Hd. round, green
green whitish shaded by black.
Rostr. 6 annulate long, rather stiff.
Feet 6-11, 13, short and feet rounded
whitish green with a white spot on
and a broken dotted line, and. Feat-
ure line slightly white spotted.
Ventr. smooth and a little shiny.
The feet solid tipped.

12 G

Green finches from Lake Muller head
Oreocarya glomerata (Rensch)

Young larvae in "a *Gabatae*" (detent H. S. Dyke)
broad col. July 1, 1901. Small green,
Hd 1.0. round, feet, apex under 2 lines
in round, but a shield shaped broad,
and 1 black ocellus. Rostr. short, soft,
whitish, broad taper just finely smooth
showing 3 annulate the feet dotted
a concolorous shield ventrally in 2.
The feet close together, projected back,
moderate. No abd. feet or feet
slight rudimentary. Feet. Gloried on back
in 6-12 & 13 (?). Hd. between rounded
in form as in 12. The feet all
whitish unmarked.
Before last. Hd. also the feet medium and
spatulate. Rostr. whitish, green from front
a faint, smooth, feet, and 1. large feet
3-5 annulate. Rostr. showing the feet
black tipped, a dark shade each side
ventral plate of 2 and a ventral spot
of 3 & 4. Abd. feet rudimentary.

12 H

Sp on 1064 plant. All inside white
very black. Red patches much
just. feet a feet for 6-13. Pys
± 6 annular, a small round green
a white stig. stuff.

12 I

aquatic eggs on raw water. Small shellfish
eggs. Aug 12 1901. In elliptical mass, more
pointed at one end 4.5×2 mm. The eggs
are very small, the top of the mass formed by
them pointed small ends, the sides 2
and a little oblique, joined by a row of
irregular spherical cells at the lower
surface of the egg. A stream of eggs. Single egg
cylindrical, tapering at the ends.
The smaller one has the other larger, and
is truncate, smoky brown, darker at
the pointed end, smooth, without distinct
striations, the mass blackish brown. Edge
cells pointed blunt at one end, more
flat at the other, a black point
at the top surrounded by a ring from which
radiate converging striae. Surface granular.
They seem to be old eggs but more likely
are no edge cells (= covers) egg would
be with a black point and radiating
striations, helped by a small white dot
in the center. All died when put in
12.0 water.

Silene purpurea

12 J

Colony larvae in stream above wheel
dam and in spring pool. Bellport 28
Aug 26 1901. 3 per cent in stream, none
common in pool. Both Anopheles
in both cases. White ringed antennae
positive similar to purpureus, perhaps a
little deeper in color from large tube
found near spring. See easily taking
to bottom. Hd large, flattened, sharp
as in purpureus but broader. Larger in
proportion, antennae longer, the basal
joint thick, long, white, black at tip,
dorsal joint black, more slender, eyes
black, posterior rounded to a point. Hd
translucent pale brown, smooth, brown
dorsum. No trace of black in dorsal. Antennae
black, stout, acute, posterior of head. Thorax
black, wide, at meeting shoulder like
a dark ring, green to green. Abdomen
slender, uniform, not as long as
3rd abd. with 11 segments like purpureus
and a long 12th segment. Head about as
thin back slender as long as 1/2 of abd.
Antennae 12-segmented, 2nd seg. and 3rd with
light 2 fine hairs. Ant. 1st segment is
black, ventral by the dark al. canal
and silver tracheal tubes. Hair long, 1/2
in. subequal in all segs.

One in the Taffy Pt. pool - Sept 18 found

12 K

(over)

Colony spring Taffy Pt. place - under all 12 J
found in river, cold but not so cold - under 12 J, found
in swimming pool W Bellport - all 12 K

Colony larvae in stream above
wheel dam with Anopheles and 12 J.
Meaning to surface and not deep,
used to distinguish from Anopheles
some position. Like to hide under
leaves. Sluggish - often not moving
or actually tracked. Hd oval, longer
on side, proportionally small, pointed
off, the antennae small, divergent.
Dorsal black, thorax slender, dark
at anterior, flattened to size of abd.
in ventral. Ant. uniform tapering
to distal part; 1st seg. slender, with
finger. Ant. black, with short, not
as long as 2 seg. from under 1st seg.
with 4 distinct black spots, teeth
long as width of tube. All yellowish
cylindrical, al. canal dark edged by
very tracheal tube. Hair black, thin
and one equal, long, from 9 first 2
seg. also long & short like the dorsal
the next seg. black & in correspondence
of 9 equal segments long. Hairs 16 more
in swimming pool (mile W Bellport)
all under 12 K (some Anopheles). Hairs brown
little ones black. Larva found pool
in cold but not so cold as Anopheles
the head up to full of pupae

Anopheles caryocera J.S.

over Copied from original Oct 2.

12 L

Fly pupa just like *Wassmania* one but
very large, Spring 1901, Bellport, Aug 1901
the slender funnel-shaped thoracic air
tubes without gills, small fan-like paddles

12 K Egg in warm pool with 12 K. O.D. mass
floating on the water (but about 1/2 submerged)
eggs, erect, microscopic and dense, closely placed
that just appeared. Mass about 2 mm.
Eggs elongate cylindrical, bluntly rounded at large
(chitinous) end, minutely reticulate central elongation
representing a central cord; minute, the
tapered 1/4 roughly granular with large pro-
jecting granules. Dark brown shaded to
black at apical (small) end. Hatched Aug 29
larva 17, body pale, very black w. about 2 mm.
Sept 3 Hatched 3+ mm. as first larva
with black shade about. Head of thorax as
1-2 and legs very black, other as above
as to be described by legs. Larva about 12 K
not found black if next day.
Sept 10 Hatched 4 and present

subconsolidated

12 M

larva in blacksmith's water barrel
about May, Aug 1901. In a tube-shaped
mass of black mud, loosely spun together
growing free in water. Wriggle with a
squirming motion. Hd. a little lighter
wide, flat, rounded, oblique, sloping
to 1/2 high; eyes in the angle. Small
black antennae rudimentary, simple; lar-
va distinct with two simple hairs.
one simple hair on head. Body slender
tapering, last 2 then joint gently enlarged
lateral side of tubular part. A black
a piece being a large, long of oblique
and chitinous, a large and seg. a small
very black covering, subsegmented (as
along tubular) a long of chitinous part
the last segment, and the cover
a ring of black and brown color
at coral red, translucent, at coral
black, more opaque. With a group of hairs
on with head near feet, thorax and
very cases of small covering the long coils
cases. A deeper band of fine black
spiratory filaments on posterior
lateral long, tapering, gently curved. Side
more to black filaments. Larva 1 pupa
in weather, do not come to surface.

12N

Case worms in ocean but under *Terminia*
 leaves in debris. Stage 12M but smaller
 and all colorless white transparent.
 in mud any stream or pool. Hatched
 4/4. Sept 1901. 4d rounded, flattened,
 feet but somewhat retracted, white
 head with eyes & two conical black
 spots. Body slender, filamentous,
 undulating. A ventral band or projection
 bearing a tuft of several spines. Four
 and five sharp spines on a thin
 whitish filament at each end
 of body in blackish muddy deposit.
 A double tuft of white from each
 segment dorsally near top.

Stage is a rather large case similar to
 the larval one. Hatched as a 12M the
 case being a rounded prominence
 above the slender body ending in
 a ventral flattened lamellar pro-
 jection the head segment bearing a
 long tuft of white bristles, prominent
 bristles. Translucent, pale greenish,
 the thorax yellowish, legs dark,
 wing and legs cases very transparent
 a tuft of periothia cones placed in
 quaternary.

12O

Stage larvae in fresh water marsh at
 2/4 by bank, Hatched. Marsh was dry
 2 weeks before but filled again
 by recent rains. Full of flocculent
 mud sediment. Finely irregular, easily
 descending but not settling down
 very minute. Dark colored head
 case or less infuscated, air tube
 short, further ventrally, infuscated
 body dark, largely from food.
 The flocculent brown sediment con-
 sisting of all into pellets of excrement. It
 has no organic form.

(Mixed)

Species of *Culex*

Stage tube long and slender, linear
 whitish with ringed, head wide - 12J
 tubular not white, head moderate - 12I
 tube short, conical or fusiform
 with finger like long distinct tube - 12O
 with ring of infuscated
 with ring of infuscated tube - 12P

- 1. *Culex constrictus* Latreille
- 2. *Culex pumilus*
- 3. *Culex strimmarum* Dyar & Knab (mixed)
- 4. *Culex sollicitans*

12 P

Culex larvae in water mostly rain but
evidently had been washed into
by last storm (Sept 6th). Taste not
crackish but not perfectly fresh - a
slight trace of salt. Anagrus 23
Sept 16 1901. Mostly all pupae, a few
larvae, very lively and staying down
a long time, longer than the pupae
water in a low steady or fairly strong
current of not permanent water.
Culex sollicitans pupae abundant
just pupae and in some numbers
in the grass. Not biting larvae.

(mixed)

12 Q

Nottingham Plant Larvae (*Aedes smithii*)
from Edmunt, New Brunswick, N. J.

Oct 10 1901. Not rounded Gasteropod.

Plumbed eyes very small a round black
dot, not transverse; mouth brown
long but not long, anterior small
slender, without perceptible rounded tip
and head small, pale brown, weakly
but distinct & uniformly colored. White
gills but just behind legs, then narrowing
gradually to antennae. Coloration very faint,
whiter, spots brownish. Thorax quadrate,
a little wider than long, square angled,
the 3 rays rounded anteriorly and equal.
Legs long, equal, anterior & anal
are very small. Body slender, proboscis
slender, legs equal but hairs long on
anterior. The long hairs on the wing is
narrower but not a length of 1/2.
Setae short, of 3 or 4 kinds. Last coxae
with a single row of short setae.
Anterior shorter than 2nd seg. rounded
anteriorly with 2 rows of hairs in
middle of 1st seg. and one short, round
spike on 2nd seg. with 2 large pedicel
like processes as plain as glass and con-
tinuing to the end of the wing. Last seg. of
the 1st seg. of 1st seg. Last seg. of 1st seg.
terminates in last seg. the ventral part

12 R

In muddy rain water. Middle containing Anticella, Diatom & other Protozoa with the middle Amphipods on two bath near canal about Blumbers IS, Ind. Oct 12 1901.
 Shape of sylvestris fup. Hd round flat, narrow before. Eyes large transverse; pale brownish, dark brown on outer. Antennae long (as long as body) eye & base and slender, uniform outer 3/4 black, tips small at middle, end black 3 & 4 finger; smooth brush normal. Thorax moderate rounded, bulbous; body cylindrical thick, seg. and slight bulging, gradually a little smaller post. Hair abundant & unequal length, short, thoracic ones about 1/2 width of thorax abd ones in post segment are 1/2 width of seg. less visible (fewer post). Tube brown, outsp. in about 5x as long as wide, double section below narrowed; sides covered of fine teeth each tooth with flat like base & spines. Last seg 3/2 as long as wide. Horn rings d. Knobs double normal, scattered brush large but not long. Finger slender small inconspicuous. (desc. in water with lens)

13 A

Larvae on ash D.S. mature and all over trunk May 13 1902. Theyre to be S. Vanda but Mr. Marlatt says different. Hd 1.6 round, narrow at mouth of open slightly shiny white. Eye narrow black, smooth and broad. Body flattened ventrally, robust rather highly arched d. ends slightly rounded. Segs rather fine 8 & annulate, white, opaque d., the d. green & narrow transverse line, side translucent, 2 and 3rd fold broadly ochreous yellow. The feet small abd 6-13, all pale. Last stage same but streaked with smoky and slightly shiny. Hd smoky shaded.

